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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SEDIGHIAN, REZA	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/023,452	PELLETIER ET AL.	
	Examiner	Art Unit	
	M. R. Sedighian	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. This communication is responsive to applicant's RCE and Remarks filed 5/5/06. Claims 1-27 are now pending.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 18 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker (US Patent No: 6,115,159) in view of Kubo Kiyoshi et al. (Japanese Patent No: 57-173237), or Product Brochure, "PCI RCI System," Fiber Optic Extender for Camera Link or LVDS (AIA) C.

Regarding claim 18, Baker teaches a system comprising: a camera-mountable optical transceiver (24, fig. 2) for transmitting a downstream optical signal (OCA, fig. 2) and for receiving an upstream optical signal (OCU, fig. 2); a remote optical transceiver (22, fig. 2) for transmitting the upstream optical signal (OCU, fig. 2) and for receiving the downstream optical signal (OCA, fig. 2); a fiber optic cable (30, fig. 2) coupled between the camera-mountable optical transceiver (24, fig. 2) and the remote transceiver (22, fig. 2) for carrying the downstream (OCA, fig. 2) and upstream (OCU, fig. 2) optical signals (col. 3, lines 25-48). Baker differs from the claimed invention in that Baker does not specifically disclose a connector for coupling the fiber optic cable directly to the transceiver. However, it would have been obvious to a person of ordinary skill in the art that fiber 30 can be connected to transceiver 24 through a connector to further provide the transmission and coupling of signals. For example, Kubo Kiyoshi teaches a

camera (16, fig. 3) that is coupled to an optical transmitter (18, fig. 3) by an optical fiber (19, fig. 3) through an optical connector (20, fig. 3). Likewise, the Product Brochure, "PCI RCI System" Fiber Optic Extender for Camera Link or LVDS, describes (see page 2) about an optical fiber cable that is connected through a connector to an optical transceiver (the RCI module) and a CCD camera (see page 3, fiber optic cables and transceivers). As it is taught by Kubo Kiyoshi and the Product Brochure, "PCI RCI System", it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a connector for coupling the optical fiber 30 of Baker to transceivers 22 or 24, as such connectors are taught by Kubo Kiyoshi and Product Brochure, "PCI RCI System", in order to provide a proper coupling and precise transmission of optical signal.

Regarding claim 20, Baker further teaches the camera optical transceiver (24, figs. 2, 3) comprises: a transmitter (118, fig. 3) for coupling between a camera (12, fig. 2) and the fiber cable (30, fig. 2) and adapted for converting an electrical input information signal (CA, figs. 2, 3) received from the camera to the downstream optical signal (col. 3, lines 49-67, col. 4, lines 1-33); and a receiver (122, fig. 3) for coupling between the fiber and the camera and adapted for converting the upstream optical signal to an electric information output signal (col. 4, lines 50-59).

Regarding claim 21, Baker further teaches the electrical information input and output signals include video signals (col. 4, line 58).

Regarding claim 22, Baker further teaches the electrical information input and output signals include audio signals (col. 3, line 20-22).

Regarding claim 23, Baker further teaches the electrical information input and output signals include data signals (col. 4, line 58).

Regarding claim 24, Baker further teaches the remote optical transceiver (22, figs. 2, 4) comprises: a transmitter (218, fig. 4) for coupling between a remote camera control unit (10, fig. 2) and the fiber (30, fig. 2) and adapted for converting an electrical information input signal (CU, figs. 2, 4) received from the remote camera control unit (10, fig. 2) to the upstream optical signal (OCU, figs. 2, 4); and a receiver (222, fig. 4) for coupling between the fiber cable (30, fig. 2) and the camera control unit (10, fig. 2) and adapted for converting the downstream optical signal received from the fiber to an electrical information output signal (col. 5, lines 53-67, col. 6, lines 1-6).

Regarding claim 25, Baker teaches the optical transceiver (24, fig. 2) include a connector cable (18A, 14B, fig. 2) for electrically connecting the optical transceiver (24, fig. 2) to a camera (12, fig. 2) and wherein the optical transceiver is adapted to select a camera specific data signal type responsive to a connector cable option (col. 3, lines 25-35).

4. Claims 1, 3-14, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desmons (US Patent No: 5,150,442) in view of Kubo Kiyoshi et al. (Japanese Patent No: 57-173237), or Product Brochure, "PCI RCI System," Fiber Optic Extender for Camera Link or LVDS (AIA) C.

Regarding claims 1, 14, and 26-27, Desmons teaches a transceiver for providing an interface between a camera (CA, fig. 2) and a fiber optic cable (1, fig. 2), comprising: a transmitter (11, fig. 2) for coupling between the camera and the fiber optic cable (col. 3, lines 7-

15, 35-39) and adapted for converting an electrical information input signal (A, fig. 2) received from the camera to an optical output signal (col. 3, lines 40-42); a receiver (13, fig. 2) for coupling between the fiber optic cable and the camera (col. 3, lines 65-68) and adapted for converting an optical input signal received from the fiber cable to an electrical information output signal (col. 3, line 68). Desmons differs from the claimed invention in that Desmons does not specifically disclose a housing for holding the transmitter and the receiver and adapted for mounting to the camera. However, it is well know that electrical or optical components can be housed within a housing for reasons of protection, isolation, and safety. It is obvious to a person of ordinary skill in the art at the time of invention that the transmitter and receiver of Desmons are housed within a housing, and that the transmitter and receiver are mounted to the camera, in order for the transmitter and receiver to transmit and receive the incoming electrical information signals optically. Desmons further differs from the claimed invention in that Desmons does not specifically disclose a connector for coupling the fiber optic cable directly to the transceiver. However, it is well known to incorporate fiber optic connector(s) to connect a fiber cable to a transmitter, or a receiver, or a transceiver module. For example, Kubo Kiyoshi teaches a connector (20, fig. 3) that directly couples a fiber optic cable (19, fig. 3) to a transmitter (18, fig. 3). Likewise, the Product Brochure, "PCI RCI System" Fiber Optic Extender for Camera Link or LVDS, describes (see page 2) about an optical fiber cable that is connected through a connector to an optical transceiver (the RCI module, see page 3, fiber optic cables and transceivers). As it is taught by Kubo Kiyoshi and the Product Brochure, "PCI RCI System", it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a connector for coupling the optical fiber 1 of Desmons to camera head 10, as such

connectors are taught by Kubo Kiyoshi and Product Brochure, "PCI RCI System", to provide a proper coupling and precise transmission of optical signal. Regarding claims 26-27, Desmons teaches the transceiver (11, 13, fig. 2) can be used as an interface between a video production facility (col. 3, lines 10-27) and a fiber optic cable (1, fig. 2), and that is comprised of a transmitter (11, fig. 2) and a multiplexer (16, fig. 2), and a receiver (13, fig. 2) and a demultiplexer (17, fig. 2).

Regarding claim 3, Desmons teaches the electrical information input signal includes a video signal (col. 3, line 17).

Regarding claim 4, Desmons teaches the electrical information input signal includes an audio signal (col. 3, line 19).

Regarding claim 5, Desmons teaches the electrical information input signal includes data signal (col. 3, line 19-22).

Regarding claim 6, Desmons teaches the electrical information output signal includes a video signal (col. 3, line 17).

Regarding claim 7, Desmons teaches the electrical information output signal includes an audio signal (col. 3, line 19).

Regarding claim 8, Desmons teaches the electrical information output signal includes data signal (col. 3, line 19-22).

Regarding claim 9, Desmons further teaches a wave division multiplexer (12, fig. 2 and col. 4, lines 4-11) adapted for coupling the optical output signal from the transmitter (11, fig. 2) to the fiber (1, fig. 1) and for coupling (12, fig. 2) the optical input signal from the fiber to the receiver (13, fig. 2).

Regarding claim 10, Desmons further teaches the electrical information input signal includes plural information signals (CA, fig. 2) received from the camera (col. 3, lines 35-36) and wherein the transmitter includes a multiplexer (16, fig. 2) for multiplexing the plural camera information signals to a multiplexed electrical input signal (col. 3, lines 35-38) and an electro-optical converter (11, fig. 2) for converting the multiplexed electrical input signal to an optical output signal (col. 3, lines 39-43).

Regarding claim 11, Desmons differs from the claimed invention in that Desmons does not specifically disclose the camera information signals comprises an analog information signal and further comprising analog-to-digital converter for converting the analog information signal to a digital signal for input to the multiplexer. However, Desmons teaches the transmission of electrical signals CA, such as video signals, coming from the camera head 10, wherein the signals CA are first digitalized, and serialized in a device S1 (col. 3, lines 35-37). Accordingly, at least one of the transmitted input signals CA can be of an analog input signal that is further digitalized by the device S1 (or by an analog-to-digital converter).

Regarding claim 12, Desmons further teaches the receiver includes an optical to electrical converter (13, fig. 2) that converts the optical input signal to a multiplexed electrical signal (B, fig. 2) and a demultiplexer (17, fig. 2) for demultiplexing the multiplexed electrical signal to plural remote information signals (UC, fig. 2 and col. 3, lines 67-68, col. 4, lines 1-3).

Regarding claim 13, Desmons further teaches digital to analog converter circuitry for converting one of the remote information signals to an analog signal (col. 4, lines 1-3).

Regarding claim 17, Desmons teaches a receiver (13, fig. 2) for converting an optical input signal to electrical information output signal (B, fig. 2) and wherein the housing is further adapted for holding the receiver (col. 3, lines 67-68, col. 4, lines 1-3).

5. Claims 1-2, 14-16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker (US Patent No: 6,115,159) in view of Kubo Kiyoshi et al. (Japanese Patent No: 57-173237), or Product Brochure, "PCI RCI System," Fiber Optic Extender for Camera Link or LVDS (AIA) C, and in further view of Hurwitz (US Patent No: 5,568,205), or Maruichi et al. (US Patent No: 5,469,211).

Regarding claims 1, 14, and 18, Baker teaches a transceiver (24, figs. 2, 3) for providing an interface between a camera (12, fig. 2) and a fiber optic cable (30, fig. 2), the transceiver comprising: a transmitter (118, fig. 3) for coupling between the camera and the fiber optic cable and adapted for converting an electrical information input signal (CA, fig. 2) received from the camera (12, fig. 2) to an optical output signal (OCA, fig. 2 and col. 3, lines 25-48); a receiver (122, fig. 3) for coupling between the fiber optic cable and the camera and adapted for converting an optical input signal (OCU, fig. 2) received from the fiber cable (30, fig. 2) to an electrical information output signal (CU, fig. 2); a housing for holding the transmitter and receiver (it is known and obvious that the transmitter and receiver are housed within a housing for reasons of safety and protection). Baker differs from the claimed invention in that Baker does not specifically disclose a connector for coupling the fiber to the transceiver. However, it would have been obvious to a person of ordinary skill in the art that fiber 30 can be connected to transceiver 24 through a connector to further provide the transmission and coupling of signals.

For example, Kubo Kiyoshi teaches a camera (16, fig. 3) that is coupled to an optical transmitter (18, fig. 3) by an optical fiber (19, fig. 3) through an optical connector (20, fig. 3). Likewise, the Product Brochure, "PCI RCI System" Fiber Optic Extender for Camera Link or LVDS, describes (see page 2) about an optical fiber cable that is connected through a connector to an optical transceiver (the RCI module) and a CCD camera (see page 3, fiber optic cables and transceivers). As it is taught by Kubo Kiyoshi and the Product Brochure, "PCI RCI System", it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a connector for coupling the optical fiber 30 of Baker to transceivers 22 or 24, as such connectors are taught by Kubo Kiyoshi and Product Brochure, "PCI RCI System", in order to provide a proper coupling and precise transmission of optical signal. The modified camera transmission system of Baker, Kubo Kiyoshi, and Product Brochure, "PCI RCI System" further differs from the claimed invention in that Baker, Kubo Kiyoshi, and Product Brochure, "PCI RCI System" do not disclose the housing is adapted for mounting to the camera. Hurwitz discloses a transmitter housing (19, fig. 1) can be mounted (col. 6, lines 11-20) to a camera (17, fig. 1). Likewise, Maruichi teaches a remote control receiver (10, fig. 1) can be mounted to a camera (col. 2, lines 51-67). As it is taught by Hurwitz and Maruichi, it would have been obvious to an artisan at the time of invention to mount the transceiver 24 of Baker to camera unit 12 to provide a movable camera mounted wireless audio/video transmission system.

Regarding claims 2, 15-16, and 19, the modified camera transmission system of Baker, Kubo Kiyoshi, and Product Brochure "PCI RCI System" differs from the claimed invention in that Baker, Kubo Kiyoshi, and Product Brochure "PCI RCI System" do not disclose a housing that includes a first plate on a first side for mounting the housing to the camera and a second

plate on a second side adapted for mounting the housing to a power source. Hurwitz discloses a camera mounted wireless audio/video transmitter system (17, 18, 19, fig. 1 and col. 6, lines 11-27), wherein a customized mounting plate is provided (col. 6, lines 15-17) within a transmitter (19, fig. 1) to make a power source (18, fig. 1) integrable with the camera (17, fig. 1). Maruichi discloses a remote control receiver housing (10, fig. 1) with first plate on the first side of the housing (17, 17a, 10c, 10d, 17b, fig. 1) and a second plate on a second side (10a, 10b, fig. 1) adapted for mounting (col. 2, lines 51-67, col. 3, lines 1-8) the housing to a power source (20, fig. 1) and to the camera (1, fig. 1). As it is taught by Hurwitz and Maruichi, it would have been obvious to an artisan at the time of invention to provide a transceiver housing with a first and second plates, for the transceiver housing 24 of Baker, to connect the transceiver module 24 to the camera and to a power source to further provide a movable camera mounted wireless audio/video transmission system.

Regarding claim 16, Hurwitz teaches the power can be passed from the power source to the camera through the housing and is tapped off to supply power to the apparatus (col. 6, lines 17-26).

6. Applicant's arguments filed 5/5/06 have been fully considered but they are not persuasive.

Remark states Kiyoshi teaches a connector that couples an optical fiber to an optical transmitter not a transceiver. Even though Kiyoshi teaches an optical connector 20 that couples an optical fiber 19 to an optical transmitter 18, it would have been obvious to incorporate such kind of connector to connect the optical fiber 30 to transceiver 24 of Baker, as discussed above.

Remark further states Hurwitz does not teach a first plate and a second plate. Hurwitz teaches a transmitter 19 that is mounted to a camera 17 and to a power source 18 (col. 6, lines 11-20). Hurwitz further teaches transmitter 19 is mounted with a customized mounting plate (or a first plate) that is provided to make the battery 18 integral with the camera 17 when it is attached (col. 6, lines 15-17). As to a second plate, it would have been obvious that the transmitter housing 19 has a second plate for mounting to the camera 17. Therefore, it would have been obvious to provide a first and a second mounting plate, as it is taught by Hurwitz, in the transceiver housing 24 of Baker to connect the transceiver module 24 to camera 12 and to a power source to further provide a movable camera mounted wireless audio/video transmission system, as discussed above.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. R. SEDIGHIAN
PRIMARY EXAMINER